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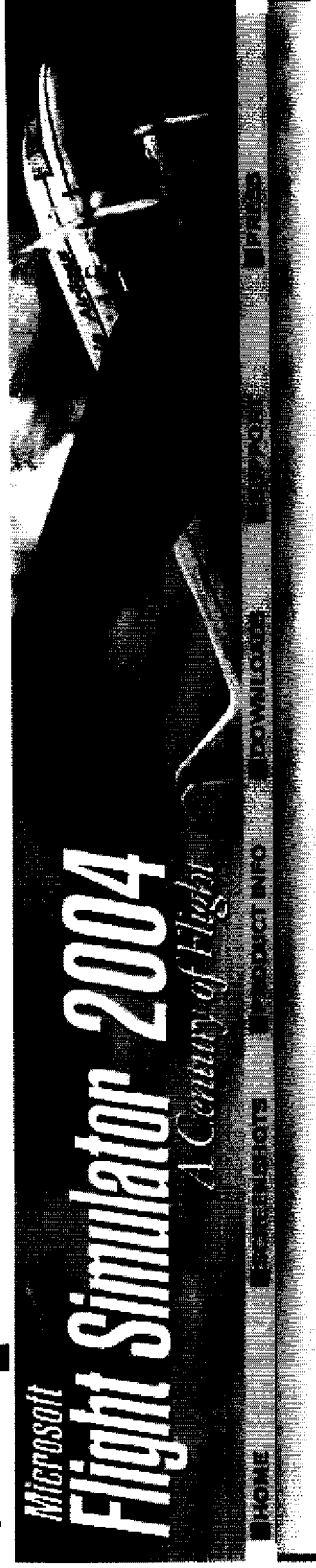
Microsoft Flight Simulator 2004 *A Century of Flight*

FLIGHT SIMULATOR 2002 SOFTWARE DEVELOPERS KITS

Welcome to the Software Developers Kit (SDK) series for **Flight Simulator 2002.** The Flight Simulator team is publishing this reference for developers and enthusiasts who want to create add-ons for and customize Flight Simulator 2002. We're publishing the SDK in installments.

Although portions of the SDK may prove useful to Flight Simulator enthusiasts with little or no programming experience, keep in mind that many parts of the reference assume familiarity with the C programming language, Macro Assembler (MASM), and game development.

Please note: The information in these SDKs is not supported by Microsoft Product Support.

Most parts of the SDK are distributed as zip files. The .zip files may include a text document, tools, sample files, and other information to help you put the information to use.

To download the SDKs, right-click on the link provided, and when the pop-up menu appears, choose Save As.

The SDKs covered on this page:

- **ATC Voicepack SDK**
- **Aircraft Container SDK**
- **Traffic Database Builder Utility**
- **FSEdit SDK**
- **Special Effects SDK & BGL Placement Tool**

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- **Panels and Gauges SDK**
- **Autogen SDK**
- **MakeMDL SDK**
- **MDL Format SDK**
- **GMAX Scenery Tutorial**
- **CAB File SDK**
- **Netpipes SDK**
- **Multiplayer/Flight Insructor SDK**
- **ABL SDK**
- **Flight Simulator 2002 Scenery SDKs**

ATC VOICEPACK SDK

This programmer's reference for the ATC Voicepack Software Development Kit (SDK) describes the tools used to design and build air traffic control voicepacks for Microsoft Flight Simulator 2002. The term "voicepack" refers to a compressed file (.gvp file) that contains all of the content (audio and text) required by the ATC system. The SDK includes the information you need to create a fully functional voicepack for Flight Simulator 2002.

To create new voicepacks, you should understand how to record, edit, and insert markers in .wav files.

You can use voicepacks to:

- Create text and audio in any language supported by Microsoft Windows.
- Change the ATC text to read any way that suits your purposes (including the use of non-English characters).
- Create separate voicepacks that say phrases differently in different voices.

You cannot:

- Use this process to change audio content in the voicepacks that shipped with Flight Simulator 2002. You can only create new voicepacks.
- Change phrase IDs (see below for an explanation of phraseology structure).
- Add phrase IDs that do not currently exist in the phrases file except agent and airport names, airlines, and aircraft types and models.
- Have the ATC system in Flight Simulator 2002 use regional voicepacks as you fly in different parts of the world.

DOWNLOAD THE VOICEPACK SDK (18MB)

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AIRCRAFT CONTAINER SDK

The Aircraft Container system organizes Flight Simulator 2002 aircraft files and attributes so that most aircraft-related files are located close together. This logical and consistent organization makes the files easy to customize.

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This SDK includes the following sections:

- File Hierarchy: Provides an overview of the aircraft container system's organizational structure.
- The Aircraft.cfg file: Explains the structure of and parameters in an Aircraft.cfg file, including the use of configuration sets that enable components to be shared among several aircraft.
- The Kneeboard Content files: Explains the structure of the files that populate the tabs of the kneeboard and how to customize them.
- The Panel.cfg file: Provides a brief description of a Panel.cfg file.
- The Model.cfg file: Explains the structure of and parameters in a Model.cfg file
- The Sound.cfg file: Explains the structure of and parameters in a Sound.cfg file
- The Texture folder: Describes the contents of a Texture folder.
- Using Aliasing: Explains how to use aliasing to avoid file duplication by sharing components among several aircraft.

Important Notes:

- This SDK documents the aircraft container system and related files as implemented in Flight Simulator 2002. Not all of the features and functionality described here are backward-compatible with aircraft from earlier versions of Flight Simulator and Combat Flight Simulator.
- This document contains information on how to modify and share components among existing aircraft. It does not explain how to create new aircraft.
- The .cfg files referenced in this document are simple text files ("configuration" files with a .cfg extension); they can be viewed and edited using any text editor, such as Microsoft Notepad. They can be found in the appropriate aircraft subfolders of the FS2002\Aircraft folder. To become more familiar with the structure and syntax used in .cfg files, you should view actual files as you read this document. These files should be modified only–and with caution–by experienced developers, as changes could render aircraft inoperable.

DOWNLOAD THE AIRCRAFT CONTAINER SDK (183kb)

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TRAFFIC DATABASE BUILDER UTILITY

You can use the Traffic Database Builder to replace the default traffic database that ships with Microsoft® Flight Simulator 2002. By changing the database, you can customize air traffic routes and schedules to match real airline schedules, add realistic regional traffic, and so forth.

To use this utility, you must edit or add several .dat files that contain data about the airports, aircraft, and routes that work with the ATC system. You can edit and create these .dat files with any text editor (for example, Notepad). After you create the appropriate files, run the TrafficDatabaseBuilder utility to build the appropriate ATC database files. The Traffic Database Builder SDK explains the process in detail and describes the parameters for each of the commands.

The Traffic Database Builder SDK includes several files packaged in a self-extracting .exe file. To download this file, right-click the link below. When the Save As dialog box appears, use the controls to navigate to the folder where you want save the SDK and click Save. To extract the files, double click the .exe file and follow the instructions. The instructions for using the SDK are in the file TrafficDatabaseBuilder.doc.

Download the Traffic Database Builder Utility SDK (217 Kb)

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F S E D I T S D K

The Aircraft Editor (FSEdit) included with Microsoft® Flight Simulator 2002 Professional Edition is a tool with a graphical user interface. You can use it to:

- Modify, add, or delete aircraft.
- Add, delete, or change aircraft panels, including gauges, instruments, and radios.
- Change, play, or remove sound files.
- Modify aircraft textures.
- Alter flight dynamics.

To make the changes, FSEdit modifies the following files: Aircraft.cfg, Panel.cfg, and Sound.cfg.

The default location for the Aircraft Editor on your hard disk is: C:\Program Files\Microsoft Games\FS2002\FSEdit.exe. The default path from the **Start** menu is: **Start\Programs\Microsoft Games\Flight Simulator 2002\FS2002 Aircraft Editor**.

To use this editor, you need basic knowledge of aircraft and aerodynamic terms and concepts. You may also need a Pilot's Operating Handbook (POH) or similar reference material for the aircraft you want to modify, or you can use the default values provided by the editor.

This editor does not provide a visual model for your aircraft. To create a visual model, you must create a new 3-D model or edit an existing visual model with the gmax tool created by discreet and provided in Microsoft Flight Simulator 2002 Professional Edition.

To launch the editor, double-click the FSEdit.exe file or select the FS2002 Aircraft Editor program from the **Start** menu in Windows.

Sections in this document include:

- Basic guidelines - Basic information on FSEdit.
- Adding or deleting an aircraft - Instructions on how to add or delete an aircraft.
- Changing panels and gauges - Instructions on how to modify panels, gauges, instruments, and radios.
- Replacing sound files - Instructions on how to delete, change, or add sound files.
- Modifying textures - Instructions on how to modify the textures (graphics) on the exterior of the aircraft.
- Altering flight dynamics - Instructions on how to alter the flight dynamics.

D o w n l o a d t h e F S E d i t S D K (2 2 8 K b)

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S P E C I A L E F F E C T S S D K & B G L P L A C E M E N T T O O L

Microsoft Flight Simulator 2002 introduces a new special effects system, which had its debut in Microsoft Combat Flight Simulator 2. Simply put, the special effects system places emitter

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points in the Microsoft Flight Simulator world, which then spew forth particles. These particles can have rules of physics applied selectively and creatively to approximate a variety of real-world effects--from wakes on pontoons to fireworks above Las Vegas. This particle-based effects system has been improved from the previous version, especially with the introduction of the "controller effect. " A controller is an effect that can emit other effects, creating a great degree of subtlety and variety.

This SDK describes the special effects file format, the .fx files. These files are used by the simulator to portray various effects, playing a programmed sequence of particle emission, rather like a score of music.

To use these tools, you must edit or create effects files (.fx files) that contain data about the emitters and the particles being emitted. You can edit these .fx files with any text editor, such as Microsoft Notepad. No programming knowledge is needed; however, it may take some practice using the parameters to understand how they control the effects.

This SDK will help you to:

- Edit an existing Flight Simulator 2002 effects file (.fx).
- Create a new Flight Simulator 2002 effects file (.fx).
- Update Combat Flight Simulator 2 effects files (.fx) so that they can be used in Flight Simulator 2002.
- Place an effects file (.fx) into the Flight Simulator 2002 world. (For information about placing an effects file, see the tutorial How to Place Special in Flight Simulator.)

You cannot use this SDK to:

- Apply new Flight Simulator 2002 effects in Combat Flight Simulator 2, or in previous versions of Flight Simulator.
- Add new special effects to aircraft.

This SDK contains three documents and two folders. One folder contains two applications, the other contains several example files. Everything that you need to create, modify, or place a special effect for Flight Simulator 2002 is contained here. The link to the self-extracting package that contains all the files for this SDK follows this introduction.

FS2002 Effects.doc - A Word document that details the specifics of the effects file format for FS2002.

Effects Parameters.txt - A text file that details the specific parameters available through FXPlacer.exe, the program used to place special effect files in FS2002.

How to Place effects in Flight Simulator.doc - A Word document containing a tutorial for placing special effects files in FS2002.

Effects_Placement - A folder that contains two applications: BGLPlacer.exe and BGLC.exe. The details for using these programs are covered in Using the effects placement tool.doc

Special_Effects_samples - A folder containing some example special effects files.

NOTE: You will also benefit from having the scenery add-on area FinishedNiagaraSample installed in Flight Simulator 2002. This folder is available in the same location as the other SDK documents. Instructions for installing the scenery are contained in the document "Tutorial: How to Place effects in Flight Simulator.

BGL PLACEMENT TOOL

The BGL Placement Tool is a stand-alone tool that can be used to place special effects within the Microsoft Flight Simulator 2002 world. This tool generates a file that can be compiled for

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use by the simulator. The Tutorial in this SDK walks through a step-by-step procedure for placing an effect for use within the simulator.

BGLPlacer.exe is the application used to place special effects. It generates a .csv file, which is used by the stand-alone tool, BGLC.exe, to create a placement file. You cannot use BGLPlacer.exe to edit or create new effects, although you can use it add special parameters that modify how the effect is generated within Flight Simulator.

The tutorial is easy to follow. You must know how to determine the latitude/longitude coordinates for the location within the Flight Simulation world where you want to place the special effects file.

The BGL Placement Tool allows you to:

- Place an existing effects file (.fx) using Latitude/Longitude coordinates in the Flight Simulator world.
- Place a new effects file (.fx) using Latitude/Longitude coordinates in the Flight Simulator world.
- Create parameters for a placed effects file, such as time of day of generation or random appearance.
- Place multiple effects with multiple parameters in a specific location.
- Place a single effect in multiple locations.

The BGL Placement Tool does not allow you to:

- Add an effects file to a 3-D object.
- Create new effects files. For more information about creating new effects files, see the Special Effects document, which is included in the Special Effects SDK.
- Edit existing effects files. For more information about editing existing effects files, see the Special Effects document.

This SDK consists of the following two packages. Please download them both.

Download the Special Effects SDK (743Kb)

Download the Niagara Falls sample (2.1Mb)

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PANELS AND GAUGES SDK

The Panels and Gauges SDK for Microsoft Flight Simulator 2002 provides the information you need to create new gauges and panels for aircraft in Flight Simulator 2002. This SDK includes the following:

- Information on programming panels and gauges.
- Sample code for several typical gauges that you can modify for your own use. You can find these samples in the \sample subfolder of the location where you install this SDK.
- The complete Gauges.h file for Flight Simulator 2002.

Documents in the SDK provide the following information:

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- An overview of the Panel system within Flight Simulator 2002.
- A discussion of how to write the necessary code to make the gauges work. (This discussion references the sample gauges frequently, so make sure you have them handy.)
- A programming reference listing the functions and variables you'll need to create your own panels and gauges.
- An appendix on creating artwork for panels and gauges.
- This document references, but doesn't include, the information contained in the Aircraft Container SDK. That SDK provides details on how all files within the Aircraft Container system interrelate. For specifics, refer to that SDK.

The process of creating a brand-new panel from scratch can involve all of the following steps (not necessarily in this order):

- Choose the aircraft for which you want the new panel.
- Identify a relatively similar aircraft within Flight Simulator 2002 and use its .air file as the basis for your plane's flight dynamics and engine/mechanical variables.
- Identify the gauges your panel will contain and create the necessary artwork. Place this artwork in a resources folder for your gauge code to reference.
- Create the panel background art for your gauges.
- Create the different interior views referenced by the Panels.cfg file.
- Create and compile the source code for each of the gauges you intend to place on your panel.
- Create an associated Panel.cfg file for your panel to place and configure the gauges.
- Place the gauges on your panel background.
- Place the necessary files in the appropriate folders for your aircraft.

Important: The information included in this document is intended as a guide for programmers. It assumes that you are familiar with aviation terminology and technology, that you have an understanding of the C programming language, and that you are familiar with the XML markup language.

Note: We've updated the Panels SDK to fix a bug that may prevent launching the Flight Instructor Station in Flight Simulator 2002 Professional Edition.

Download the Panels and Gauges SDK (1.08Mb)

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AUTOGEN SDK

Through the use of automatically generated (autogen) scenery, Microsoft Flight Simulator 2002 displays buildings and vegetation throughout the simulated world. Flight Simulator 2002 creates and displays this scenery at runtime using one of two methods: a lookup table or handcrafted texture annotations that specify footprints for the objects. To define the appearance of both the buildings and vegetation that are generated, autogen uses texture sheets. The Autogen SDK describes two tools: The Autogen Annotation tool and Image Tool. These tools enable you to exert control over the type of objects generated at runtime, their distribution, and their appearance. The Autogen Annotation tool enables you to edit or create annotation files for both generic and unique terrain textures. This tool opens .bmp files and allows you to place footprints for objects on the image file and to set certain properties for those footprints. Autogen then uses the annotation files to display 3-D objects (buildings and vegetation). No prior programming experience is needed to use this tool. The Image Tool enables you to extract the main image from a texture sheet with MIP maps so that you can edit it with an image-editing program. You can then use Image Tool to convert your edited texture file back to a format that can be used by the simulator. No special programming knowledge is needed to use this tool. This SDK includes the following folders and files:

- **Annotator.exe program:** A stand-alone application used for creating and/or modifying .agn files used to display Autogen objects in Flight Simulator 2002.
- **Autogen SDK.doc file:** A Word document that provides an overview of the Autogen system used in Flight Simulator 2002.
- **Using the Autogen Annotation Tool.doc file:** A Word document that contains a tutorial on annotating texture files for use by autogen in Flight Simulator 2002.

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- **Autogen Texture Sheets.doc file:** A Word document that explains the layout of textures on both building and vegetation texture sheets.
- **Annotator tool example file folder:** A folder that contains the .bmp file used in the tutorial Using the Autogen Annotation Tool.
- **New_Autogen_texture_sample folder:** A folder containing five .bmp files to replace the default Flight Simulator 2002 autogen tree textures.

Download the Autogen SDK (4.3Mb)

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MAKEMDL SDK

MakeMDL (MakeMDL.exe) is a program that converts 3-D models you create with modeling tools, such as gmax (a 3-D modeling tool from discreet included with Flight Simulator 2002 Professional Edition), into scenery or aircraft objects that work with Microsoft® Flight Simulator 2002.

The method you use to run MakeMDL depends on the modeling tool you use to create 3-D objects:

- If you use **gmax**, use the MakeMDL plug-in from within gmax to export .bgl (scenery) or .mdl (aircraft) files.
- If you use modeling tools that export .x files, use MakeMDL as a stand-alone application and run it from either the command line or the MakeMDL.exe file.

This SDK explains how to run MakeMDL from MakeMDL.exe and from the command line. In addition, it provides several tables that list the part names you can use to make 3-D models compatible with Flight Simulator 2002.

To download the MakeMDL SDK, which includes Word documents that explain how to use the MakeMDL tool, right-click the link below and navigate to the folder on your hard drive where you want to copy the self-extracting SDK package. After copying the .exe file to your hard drive, double-click the .exe file and follow the instructions.

Download the MakeMDL SDK (614Kb)

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MDL FORMAT SDK

In Microsoft Flight Simulator, aircraft model (MDL) files contain the texture and animation information for 3-D aircraft models. The MDL Format SDK includes the following files:

- **MDLFMT.doc** - An introductory document that describes the file format details (including file layout, the standard parameter block, and the parameter dictionary GUIDs) for aircraft model files used by Microsoft Flight Simulator 2002.
- The SDK files are packaged in a self-extracting .exe file. To download this file, right-click the link below. When the **Save As** dialog box appears, navigate to the folder where you want to save the SDK, and then click **Save**. To extract the files, double-click the .exe file and follow the instructions.

Download the MDL Format SDK (119Kb)

GMAX SCENERY TUTORIAL

Microsoft Flight Simulator 2002 Professional Edition includes gmax, a 3-D modeling tool from discreet. By using gmax, you can create a model of a building, and apply textures to that model, and then export the model to the MakeMDL program, which places the model in Flight Simulator at the coordinates you specify.

(Note that Microsoft Product Support does not provide support for the installation or use of gmax. For help with gmax, visit the official support Web site at **http://www.gmaxsupport.com/**.)

The tutorial consists of the following three parts:

● Creating a model of a house: you create a simple model consisting of a one-story house with a garage.
● Applying textures to the model: you apply texture to each of the polygons of the house to add real-life qualities.
● Placing the model in Flight Simulator: you export the model to the MakeMDL program, and then check the model within Flight Simulator.

Download the GMAX Scenery Tutorial (5.02Mb)

Additionally, before you can complete the tutorial, you must install the MakeMDL program in the gmax plug-ins folder using the directions that follow.

To install MakeMDL in the gmax plug-ins folder:

1. Navigate to the gmax_scenery_tutorial folder. The default location is C:\fssdk\gmax_scenery_tutorial. Your path may be different depending on your installation.
2. Copy MakeMDL.exe.
3. Place MakeMDL.exe in the C:\gmax\plugins folder.

CAB FILE SDK

If you create add-ons for Flight Simulator, you can use the Cabdir utility (cabdir.exe) to combine all the folders and files in a directory into a single .cab file (similar to a .zip file), simplifying the process of distributing files to end-users, whether they download the file from a Web site or install it from a CD or floppy disk. You can use a setup utility to extract and install the files for end users or explain that they can manually view and copy files in the .cab file.

This CAB File SDK explains how to create cabinet (.cab) files from the contents of a directory using Cabdir.exe.

Download the CAB File SDK (147Kb)

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NETPIPES SDK: DATA INPUT/OUTPUT

This SDK describes Netpipes.exe, a utility that opens a data stream to and from instances of Flight Simulator that allows you to capture an aircraft's position, velocity, and other information about the simulation and play it back in another application or instance of Flight Simulator. You can use the Netpipes technique to capture data for later analysis or playback and to drive an external application in real-time.

This SDK also describes the basic format of the data stream and provides references to other sources of information about specific data structures in the stream.

Because this document deals with a binary file format and the programming concepts required for parsing or creating a data stream, you must have appropriate programming and C/C++ language skills to read and understand the sample source code.

The Netpipes.exe example in this SDK provides sample code for both collecting data and playing it back in real time to drive views of the same flight on two computers. Since this example passes data saved by one instance of Flight Simulator into another instance, no data stream processing or parsing is presented.

Data Available with Netpipes and the Flight Recorder

This SDK often refers to the flight video recording feature of Flight Simulator 2002 (for a list of the data saved by the flight video recorder, see Data Saved by the Flight Video Recorder in the Netpipes SDK). The full data stream into Flight Simulator available via Netpipes is described in the Panels and Gauges SDK. An external application can populate the data stream with any of the possible parameters regardless of whether the flight video recording feature saves them.

Download the Netpipes SDK (179Kb)

DEVELOPING MULTIPLAYER AND FLIGHT INSTRUCTOR ADD-ONS FOR FLIGHT SIMULATOR 2002

Flight Simulator 2002 provides support for peer-to-peer multiplayer flying. By leveraging Microsoft® DirectPlay® technology, Flight Simulator enables multiple users to share the same airspace through a connection with a modem, a Local Area Network (LAN), or the Internet. It's relatively easy for end users to connect with others using this technology.

In addition, Web sites can take advantage of the multiplayer features by setting up Lobbies (using DirectPlay) where users can meet on the Internet to join Flight Simulator sessions. Such a lobby can be reached from within Flight Simulator 2002, by connecting directly to an area at Zone.com.

Flight Simulator 2002 Professional Edition includes the Flight Instructor feature, which allows an instructor to monitor and change conditions for a student over the network. The Flight Instructor is built on top of the multiplayer system and can also be extended via an add-on.

This document is aimed at developers who want to build add-on products for Flight Simulator specifically designed to take advantage of its multiplayer capabilities. For example, you could use this information to create an add-on application that holds races between multiple players on the Internet or on a local area network (LAN).

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Audience

This document assumes you have the following background:

- Experience in developing applications using Visual C++ or an equivalent high-level language.
- Experience in, and understanding of, the features and capabilities of the Microsoft DirectPlay technology (from the DirectX 7 SDK). You'll find the DirectX® 7 SDK and other relevant technical information on the Microsoft Web site at http://msdn.microsoft.com/directx.

Download the Multiplayer/Flight Instructor SDK (155Kb)

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ABL SDK

ABL or "Adventure Basic Language," is a scripting language used by several Microsoft games, including Flight Simulator 2002. It is a replacement for the Adventure Programming Language (APL) used in previous versions of Flight Simulator, but the goal is the same: to provide developers of adventures and lessons access to and control of aircraft and game parameters without requiring extensive programming knowledge.

ABL is a significant departure from APL because it is an interpreted language, unlike APL, which was compiled. Making ABL an interpreted language removes one step from the adventure/lesson development cycle, speeding and simplifying production.

Download the ABL SDK (250Kb)

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FLIGHT SIMULATOR 2002 SCENERY SDKS

Have you ever heard the expression, "It's a small world"? Well, when you're trying to simulate it you quickly realize it's not! Flight Simulator 2002 offers the most realistic world environment in the history of the franchise, and to help you customize all of that content we've developed a series of SDKs. Although the complete list might look daunting, the good news is that not all of them are required. In fact, each SDK covers a unique aspect of the scenery system, enabling you to choose only the documents that you need.

To help you choose, we've provided brief descriptions of each document, and we divided them into two categories. The Basic SDKs explain how to customize scenery content with little or no custom programming. This part includes the Autogen SDK and the Custom Terrain SDK. For more complicated tasks, where programming experience and knowledge of the Flight Simulator BGL file format is required, check out the Advanced SDKs. To download the individual SDKs, click the titles below.

- **BASIC SCENERY SDKS**

AUTOGEN

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Previously released as a standalone SDK, Autogen explains how to modify the way the Autogen technology in Flight Simulator creates objects on the ground.

Through the use of automatically generated (autogen) scenery, Microsoft Flight Simulator 2002 displays buildings and vegetation throughout the simulated world. Flight Simulator 2002 creates and displays this scenery at runtime using one of two methods: a lookup table or handcrafted texture annotations that specify footprints for the objects. To define the appearance of both the buildings and vegetation that are generated, autogen uses texture sheets.

The Autogen SDK describes two tools: The Autogen Annotation tool and Image Tool. These tools enable you to exert control over the type of objects generated at runtime, their distribution, and their appearance.

The Autogen Annotation tool enables you to edit or create annotation files for both generic and unique terrain textures. This tool opens .bmp files and allows you to place footprints for objects on the image file and to set certain properties for those footprints. Autogen then uses the annotation files to display 3-D objects (buildings and vegetation). No prior programming experience is needed to use this tool.

The Image Tool enables you to extract the main image from a texture sheet with MIP maps so that you can edit it with an image-editing program. You can then use Image Tool to convert your edited texture file back to a format that can be used by the simulator.

No special programming knowledge is needed to use this tool.

This SDK includes the following folders and files:

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- Autogen Texture Sheets.doc file: A Word document that explains the layout of textures on both building and vegetation texture sheets.
- Annotator tool example file folder: A folder that contains the .bmp file used in the tutorial Using the Autogen Annotation Tool.
- New_Autogen_texture_sample folder: A folder containing five .bmp files to replace the default Flight Simulator 2002 autogen tree textures.

Download the Autogen SDK (4.4MB)

CUSTOM TERRAIN TEXTURE

Explains how to add custom terrain to the simulated environment. This SDK covers importing land class and DEM (Digital Elevation Model) data and how to texture the data by replacing standard land-class based textures or by importing aerial or satellite photos.

Download Custom Terrain Textures (9.7MB)

- **ADVANCED SCENERY SDKS**

BGL COMPILER

Describes the latest version of the BGL scenery language compiler.

Download the BGL Compiler (0.5MB)

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BGLFP

Describes new floating-point data structures and operators incorporated into the BGL scenery language.

Download the BGLFP SDK (0.2MB)

FLIGHT SIMULATOR 2000 SCENERY SDK

Describes the overall structure of the scenery system, including how to add scenery area and create scenery objects using BGL.

Note: this information is unchanged from Flight Simulator 2000. New Flight Simulator 2002 scenery features are described in the additional SDKs described on this page.

Download the Flight Simulator 2000 Scenery SDK (0.3MB)

TERRAIN SDK

Explains how to add new line and polygonal data such as roads, rivers, coastlines and lakes to the terrain system.

Download the Terrain SDK (0.5MB)

TAXIWAY MARKINGS

Explains how to add markings (including edge, center and hold-short lines) and lights to the taxiways you create.

Download the Taxiway Markings SDK (0.2MB)

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